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GOOGLE'S MOT. TO EXCLUDE UNRELIABLE TECHNICAL ANALYSES CASE NO. 5:20-CV-07956-VKD

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#### NOTICE OF MOTION AND MOTION

#### TO ALL PARTIES AND THEIR ATTORNEYS OF RECORD

PLEASE TAKE NOTICE THAT on July 1, 2025, or as soon thereafter as this Motion may be heard in the above-entitled Court, before the Honorable Virginia K. DeMarchi of the United States District Court, Northern District of California at the San Jose Courthouse, Courtroom 2 – 5th Floor, 280 South 1st Street, San Jose, CA 95113, Defendant Google LLC ("Google") will and hereby does move the Court to exclude the opinions of Plaintiffs' experts Mr. Thompson, Dr. Stec, and Dr. White. Google's Motion is made pursuant to Federal Rules of Evidence 702 and 703, Civil Local Rule 7, and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) ("Daubert"). Google's Motion is based on this Notice of Motion and Motion, the accompanying Memorandum of Points and Authorities, the Declaration of Max Bernstein and the exhibits attached thereto, all matters of which the Court may take judicial notice, all pleadings and papers on file in this action, and other written or oral argument that Google may present to the Court.

#### STATEMENT OF ISSUES TO BE DECIDED

Whether the opinions of Mr. Thompson, Dr. Stec, and Dr. White addressed herein should be excluded under Federal Rules of Evidence 702 and 703 and the standards articulated in *Daubert*.

#### STATEMENT OF RELIEF SOUGHT

Google requests that the Court exclude all opinions addressed herein as inadmissible.

#### MEMORANDUM OF POINTS AND AUTHORITY

#### I. Introduction

Network Usage Data Analyses: Plaintiffs' experts Mr. Thompson and Dr. Stec use unreliable methods to analyze the network usage data produced in discovery, inflating alleged damages far beyond what the empirical data supports. These methods range from speculative to patently false, and none pass muster under the Federal Rules of Evidence. The opinions in Mr. Thompson's "data appendix," his outputs provided to Dr. Stec, and Dr. Stec's downstream damages calculations are inadmissible as a result.

To start, Mr. Thompson is not qualified to give these opinions in the first place. He has no advanced degree, prior experience conducting similar analyses, or other relevant credentials. He

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has already made mistakes that required Plaintiffs to withdraw his initial data analysis in full, and he appears to misunderstand elementary elements of many of his asserted opinions.

Putting aside his qualifications, Mr. Thomspon's data analysis is a patchwork of guesses and sloppy errors. He asserts that all the measurements of network usage in the case can be increased by 15.6% to account for "network overhead," but the network usage data *already* counts overhead. Next, he adds to these measurements for "log loss," but lacks any foundation for this opinion. He also concludes that the network usage data produced in the case is unreliable and must be "corrected"—but these corrections end up being no more than arbitrary ways to inflate damages. He prepares output files for use by Plaintiffs' damages expert, Dr. Stec, but botches this too—the files include glaring errors that suggest they were not properly prepared or audited.

Dr. Stec, in turn, deviates from the clear instructions Mr. Thompson gave him and, without explanation, uses the wrong inputs for his calculation of damages. He then further inflates damages by purporting to "correct" the data, but, like Mr. Thompson, fails to show how this inflation could be reliable. Dr. Stec increases alleged damages still further by assuming that network usage was the same every year before 2020 as it was in 2020, despite the record suggesting just the opposite.

Collectively, these various missteps falsely increase alleged damages by *billions of dollars*. But because these methods are unreliable, these opinions are inadmissible.

Other Analyses: Plaintiffs' experts Mr. Thompson and Dr. Jules White offer other opinions that similarly lack rigor, are speculative, or are premised on unproven assumptions. Mr. Thompson attempts to create the impression that the Challenged Transfers are primarily related to advertising, but has no basis for this false claim. He makes other broad characterizations about the systems at issue in this case (which he has only limited familiarity with) that are divorced from any expert analysis and lack any basis. Last, his analysis of the data is no scientific analysis at all, as he fails to identify any methods or memorialize his findings, and the entire approach is based on a foundational guess unsupported by any evidence.

Dr. White similarly provides unreliable opinions. He baldly asserts that all Android devices send the same network transfers, but not only does he lack a basis for this assertion, it is demonstrably wrong. Next, he claims that Google does not disclose the Challenged Transfers to

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users, but it has become clear he has not read most of the disclosures at issue. Finally, he asserts that nine categories of network transfers are unaffected by six settings—but he presents these opinions in a chart, without any analysis, evidence, or other basis for them.

Expert opinions must be methodical, testable, consistent with the practices of the relevant scientific field, and otherwise more than mere speculation or assertion. None of the analyses addressed in this motion meet these basic indicia of reliability and therefore none are admissible.

#### II. LEGAL STANDARD

Rule 702 of the Federal Rules of Evidence provides that a witness "who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise," if the proponent of the testimony "demonstrates that it is more likely than not" that: "(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert's opinion reflects a reliable application of the principles and methods to the facts of the case." Leakas v. Monterey Bay Mil. Hous., LLC, 2024 WL 495938, at \*2 (N.D. Cal. Feb. 8, 2024) (DeMarchi, J.). "Rule 702 imposes a 'basic gatekeeping obligation' on district courts to 'ensure that any and all scientific testimony'—including testimony based on 'technical[ ] or other specialized knowledge'—'is not only relevant, but reliable." Simpson Strong-Tie Co. v. MiTek Inc., 2023 WL 137478, at \*2 (N.D. Cal. Jan. 9, 2023) (DeMarchi, J.) (quoting Fortune Dynamic, Inc. v. Victoria's Secret Stores Brand Mgmt., Inc., 618 F.3d 1025, 1035-36 (9th Cir. 2010)). "The proponent of expert testimony has the burden of proving admissibility." Goodell v. Soledad Unified Sch. Dist., 2021 WL 2533564, at \*5 (N.D. Cal. June 21, 2021) (DeMarchi, J.).

#### PLAINTIFFS' NETWORK USAGE DATA ANALYSES III.

#### A. Background

#### 1. The Parallel State-Court Matter.

Plaintiffs' counsel originally filed the same claims, based on virtually the same allegations, in California state court—seeking to represent a class of California Android users. Including because this case saw an intervening Ninth Circuit appeal, the *Csupo* matter has advanced through more stages of litigation. In *Csupo*, Plaintiffs served two rounds of expert reports—first, in connection with class certification in 2023 and then in 2024/2025. Plaintiffs in both cases have turned to the same experts, and the reports across the two matters are nearly identical.

## 2. The Network Usage Data Produced in Discovery.

Plaintiffs challenge certain types of cellular network traffic associated with the app Google Play services (the "Challenged Transfers"). In an attempt to quantify the volume of the Challenged Transfers, Plaintiffs' experts look to two logs Android devices can send. (Ex. 1¹ ("Thompson Rep.") ¶¶ 119-129.) Some devices, particularly earlier in the class period, sent "NetStats" and others, particularly later in the class period, sent the "Westworld" log. (*Id.*) At Plaintiffs' request, Google produced large samples of this data, spanning years and from tens of thousands of devices.<sup>2</sup>

# 3. Plaintiffs' Original Analysis of the Network Usage Data.

Plaintiffs' original technical expert, Dr. Douglas Schmidt, has a Ph.D. in computer science and was a professor at Vanderbilt before serving as Director of Operational Test & Evaluation at the Department of Defense. (See Ex. 2,  $\P$  3.) Dr. Schmidt proposed a method for analyzing the network usage data to determine the behavior of a typical Android device (the "Original Analysis"). Plaintiffs' theory is that this average can be multiplied by the number of Android devices owned by the class to arrive at classwide network usage estimates. (See Ex. 3, ("2024 Stec Rep.")  $\P$  77.)

In defending Dr. Schmidt's approach during expert challenge briefing in *Csupo*, Plaintiffs' counsel forcefully argued that the network usage data produced in discovery was reliable, going so far as to say that any contention this data was unreliable was "preposterous." (Ex. 4, 6/29/2023 Response to Google's Objections to Pls.' Expert Reports at 18.) Plaintiffs' counsel also argued that Dr. Schmidt's Original Analysis reliably analyzed the network usage data and therefore was admissible, including because he had taken steps to avoid overstating the usage at issue. (*Id.* (assuring the *Csupo* court that Dr. Schmidt's "conservative" approach would not overstate damages).) The *Csupo* court ultimately allowed and considered Dr. Schmidt's Original Analysis in granting class certification. (*See* Ex. 5, 10/26/2023 Order Concerning the Parties' Exclusion

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<sup>&</sup>lt;sup>1</sup> All "Ex." references are to the exhibits attached to the Declaration of Max Bernstein.

<sup>&</sup>lt;sup>2</sup> Google produced this network usage data in *Csupo*, but Plaintiffs have used the same data productions for their analyses in this case.

Motions and Plaintiffs' Class Certification Motion at 7.)

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# 4. Plaintiffs' Second, Withdrawn Analysis of the Network Usage Data.

Following class certification in *Csupo*, Plaintiffs replaced Dr. Schmidt with Mr. Thompson in both cases. Whereas Dr. Schmidt was a professor with a Ph.D. in computer science, Mr. Thompson has only a bachelor's degree and no experience relevant to the analysis of complex network usage data. (Ex. 6 ("Thompson Resume").) Instead, his professional history consists of contract work on mobile apps, litigation services, and helping gas stations with advertising at the pump. (*Id.*) In both *Csupo* and this case, Mr. Thompson promptly threw out Dr. Schmidt's Original Analysis and replaced it with a distorted alternative that increased damages many times over.

Mr. Thompson's new approach suffered from core methodological flaws, the most prominent of which was a foundational assumption that ultimately proved too hard for Plaintiffs to defend: Mr. Thompson insisted that (1) every single one of the tens of thousands of devices in both the NetStats and Westworld samples had (2) sent every kind of Challenged Transfer (3) every day of the multi-year sample periods (4) over a cellular network (the "Cellular Transfers Everyday Assumption"). The Cellular Transfers Everyday Assumption was directly contradicted by the network usage data itself, which showed that every device in the sample did not send every type of Challenged Transfer over a cellular network every day for years on end. (See Ex. 7 (Dr. Jeffay's "Initial Data Analysis") at II.A-C.) Mr. Thompson claimed the data must just be wrong, although he could not say why it was wrong or how wrong it allegedly was. (Id.) Based on the Cellular Transfers Everyday Assumption, he proposed "corrections" to the data—i.e., manipulations that changed what the data actually reported—that dramatically increased the alleged network traffic at issue (and therefore damages). (Id.) Whereas Plaintiffs' counsel had just previously argued in the Csupo matter that even questioning the reliability of the network usage data was "preposterous" (see Section II.B, supra), their new expert now asserted the data was so flawed that it undercounted network traffic by, at times, orders of magnitude. (Initial Data Analysis at II.A.) Mr. Thompson's "corrections" skyrocketed alleged damages into the billions in *Csupo* alone and the *tens of billions* in this case. (See Ex. 8 ("2024 Csupo Stec Rep.") ¶¶ 94-97; 2024 Stec Rep., Tables 41-46.) When the absurdity of the Cellular Transfers Everyday Assumption was pointed out at deposition, Mr.

Thompson doubled down. (See Ex. 9 ("First Thompson Depo.") at 162:14-18.)

But the Cellular Transfers Everyday Assumption was ultimately a bridge too far. Google engineers deposed after Mr. Thompson's report was served and Google's expert Dr. Jeffay<sup>3</sup> all explained why the assumption never made sense—and why Mr. Thompson's "corrections" were just arbitrary inflations of the network usage data that could not be supported by the data itself. Following these depositions, and two weeks after Dr. Jeffay served his rebuttal report in *Csupo*, Plaintiffs withdrew Mr. Thompson's analysis of the network usage data (the "Withdrawn Analysis"). Then, at a second deposition, Mr. Thompson tried to walk back the Cellular Transfers Everyday Assumption. (*Compare* First Thompson Depo. at 162:14-17, with Ex. 10 ("Second Thompson Depo.") at 495:5-496:12.)

# 5. Plaintiffs' Third and Current Analysis of the Network Usage Data.

Plaintiffs did not, however, revert to Dr. Schmidt's Original Analysis. Instead, long after all affirmative and rebuttal expert reports had been served in both cases, Mr. Thompson unilaterally served "updates" to his report that redesigned the proposed approach (the "Current Analysis"), and Dr. Stec provided corresponding changes to his damages estimates. To put the degree of Mr. Thompson's previous errors in perspective, after Plaintiffs retreated from the Withdrawn Analysis, they were forced to reduce alleged damages in this case by *billions of dollars*.<sup>4</sup>

But the Current Analysis *still* deviates from what the network usage data actually reports and still proposes arbitrary "corrections" that explode damages. Notably, Mr. Thompson conceded in a second deposition that he has *no sense for how accurate the Current Analysis is*. In fact, he admitted there could be either undercounting or overcounting, and he has no way of knowing or measuring either, but he "*believes*" it likely undercounts more than it overcounts, based only on his "understanding" of "how these devices work." (Second Thompson Depo. at 458:4-460:9 (emphasis

<sup>3</sup> Dr. Jeffay is a world-leading researcher in the area of measuring network activity and the former

chair of the Department of Computer Science at the University of North Carolina. (See Ex. 11, ("Second Jeffay Rep.") ¶¶ 2-17.) He has won awards for his research on measuring network activity

and served on the steering committee for the ACM/SIGCOMM Internet Measurement

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added).) When pressed if the Current Analysis could be wrong by a significant amount, he admitted he could not say if it was wrong by 10%, 30%, or some other percentage. (*Id.* at 460:10-25.) When asked again how inaccurate the Current Analysis might be, Mr. Thompson admitted, "I'm not sure I can quantify it." (*Id.*) Finally, when asked what confidence interval he used for the Current Analysis, he admitted he had not "thought" to calculate one. (*Id.* at 459:21-460:3.)

# 6. The Handoff from Mr. Thompson to Dr. Stec.

Mr. Thompson provided instructions and inputs to Plaintiffs' expert Dr. Stec to convert the network usage data analysis into alleged damages. Plaintiffs' counsel explained these experts previously "miscommunicat[ed]" and that "Dr. Stec mistakenly relied upon" the wrong inputs from Mr. Thompson. (Ex. 12 ("Giulianelli Email") at 2.) Plaintiffs claimed these handoff errors required both experts to effectively redo their work from scratch, long after their expert reports (and Google's rebuttal reports) had been served. (*Id.*) However, the updates that were meant to, among other things, cure these errors introduced new handoff errors. To start, Mr. Thompson provided erroneous data files to Dr. Stec that show no network traffic at all for one of the main Challenged Transfer categories. (Ex. 13 ("Updated Data Analysis") ¶¶ 8-14.) Next, Dr. Stec—an economist with no qualifications to analyze network data—ignored Mr. Thompson's directions, using different, unexplained input files and different methods than those in Mr. Thompson's instructions. (*Id.*)

# B. Argument

1. Mr. Thompson's Network Usage Analysis Is Inadmissible.

#### a. Mr. Thompson has no relevant qualifications.

As an initial matter, Mr. Thompson is not qualified to give the opinions he offers on the issues addressed herein. Plaintiffs proffer Mr. Thompson as an alleged expert in virtually every area of computer science, from logging, to software configuration platforms, to advanced device security features, to advertising systems, and beyond. (*See generally* Thompson Rep.) But Mr. Thompson lacks the basic qualifications to serve as an expert in most of these fields—he has no advanced degree or training, has held no faculty position, and has no significant body of research. (*See* Thompson Resume.) In particular, he has no qualifications to opine on complex issues of

network science and network traffic analysis. "Courts routinely exclude expert testimony where the expert's opinion is not within the scope of his expertise." Surgical Instrument Serv. Co. v. Intuitive Surgical, Inc., 2024 WL 1975456, at \*1 (N.D. Cal. Mar. 31, 2024); Avila v. Willits Envt'l Remediation Trust, 633 F.3d 828, 839 (9th Cir. 2011) (affirming exclusion where expert did not have the "special training or knowledge"). That is, Mr. Thompson's general background working on apps does not qualify him to provide complex opinions about network usage analysis. Hochen v. Bobst Grp., Inc., 290 F.3d 446, 452 (1st Cir. 2002) (finding engineer's general qualifications did not allow for him to testify as to specific machine).

This lack of qualifications and experience has shown over the course of the litigation. As

This lack of qualifications and experience has shown over the course of the litigation. As discussed above, Mr. Thompson made wildly inaccurate assumptions about the network usage data that were so indefensible they had to be withdrawn. (See Sections II.C & D, supra.) As discussed below, Mr. Thompson appears to have misunderstood basic aspects of an academic paper regarding "network overhead." (See Section IV.A.2, infra.) And throughout his reports and deposition testimony, Mr. Thompson has shown little knowledge of the methods and practices of the networking science field. For example, Dr. Jeffay has explained that establishing a confidence interval is a rudimentary step in making estimates from network usage data—and that no networking science journal would accept data analysis that ignores such fundamentals. (Updated Data Analysis ¶¶ 33-34.) Yet, as noted above, when asked what confidence interval he had determined for his Current Analysis, Mr. Thompson admitted he had not calculated one—and when asked if he could, said, "I haven't thought about it." (Second Thompson Depo. at 459:21-460:25.)

Mr. Thompson did not merely analyze the network usage data as it was reported. He instead offers complex opinions that attempt to simulate supposed gaps in the network usage data and account for events occurring deep within the infrastructure of cellular networks. (*See* Sections IV.A.2-4, *infra*.) Because he has no qualifications to give these opinions, they must be excluded.

#### b. Mr. Thompson's network overhead "correction" is unreliable.

When data is sent over a network, certain metadata that indicates where the data is from and where it is going can be affixed to the transfer—roughly similar to how address information is written on the outside of a letter. This "network overhead" can marginally increase the size of a

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network transfer, but it is already accounted for in the measurements reported in the network usage data Mr. Thompson analyzed. (Updated Data Analysis ¶¶ 46-50.) Nonetheless, Mr. Thompson instructed Dr. Stec to increase all damages calculations by 15.6% to account for "network overhead," adding hundreds of millions of dollars to alleged damages.

Mr. Thompson based this instruction on a single academic paper (the "Ahmadzadeh Paper"). (Second Thompson Depo. at 429:6-8.) But this was no expert opinion at all, as Mr. Thompson did not conduct any analysis or even apply any existing knowledge. Rather, he plucked this 15.6% figure directly from the Ahmadzadeh Paper without more, rendering the opinions unreliable. See Goodell, 2021 WL 2533564, at \*6 ("[A]n expert can appropriately rely on the opinions of others if other evidence supports [her] opinion and the record demonstrates that the expert conducted an independent evaluation of that evidence.") (alteration in original) (emphasis added) (citation omitted); Woods v. City of Hayward, 2021 WL 4061657, at \*19 (N.D. Cal. Sept. 7, 2021) (same).

In fact, when asked, Mr. Thompson was unsure whether he had even given this instruction to Dr. Stec and had to refer to his report to check. (Second Thompson Depo. at 422:13-20 ("Q: Did you instruct Dr. Stec to add a 15.6 percent overhead premium to the network usage measurement in the Netstats data? [...] A: Excuse me. Sorry. That was for the NLP data. The Netstats data – find that section.").) Then, when asked about the details of this 15.6% premium, Mr. Thompson appeared uncertain and repeatedly requested to review the Ahmadzadeh Paper itself before answering questions. (Id. at 424:17-19 ("I think the best way to do this would be to look at the paper this number comes from."), 429:3-5 ("We'd need to go back to the paper to double-check.").)

Not only did Mr. Thompson fail to apply any expertise, he also misunderstood what the Ahmadzadeh Paper analyzed, as it has no relevance here at all. As discussed above, Dr. Jeffay is a world-leading researcher in the areas of networks and measuring network activity. (Second Jeffay Rep. ¶¶ 2-14.) Dr. Jeffay explains why Mr. Thompson's reliance on the Ahmadzadeh Paper is not just debatable or imperfect, but rather nonsensical.

This is because the Ahmadzadeh Paper does not study the size of transfers of data over networks, as Mr. Thompson appears to have mistakenly believed. (Updated Data Analysis ¶ 351 4 2 ¶ 3 a 4 fit 5 d 6 c 7 C 8 th 9 e 10 in 11

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45.) Rather, the 15.6% figure Mr. Thompson uses has to do with available *radio resources*. (*Id.* ¶¶ 37-38.) Specifically, the paper estimates that in specified circumstances, the radio component of a part of certain cellular networks must use 15.6% of its resources on "necessary network functionalities such as signaling, control, or synchronization." (*Id.* ¶ 38.) This ratio has nothing to do with overhead added to a transfer that might increase its size—the only type of "overhead" that could matter here. (*Id.* ¶¶ 40-41.) To use a metaphor, if the network is a highway and each Challenged Transfer a car, Mr. Thompson is trying to measure the average amount of traffic. But the Ahmadzadeh Paper is instead measuring the size of the shoulder of the highway. Dr. Jeffay explains that a basic understanding of the topic would have been enough to know the paper is irrelevant. (*Id.* ¶¶ 37-45.)

There are myriad other, obvious reasons that the Ahmadzadeh Paper could not support Mr. Thompson's instruction, even putting aside this threshold misunderstanding of the paper's subject matter. First, the paper examines only LTE networks, but Plaintiffs also challenge transfers over 3G and 5G networks, which the Ahmadzadeh Paper does not consider at all. (Updated Data Analysis ¶ 42.) **Second**, the paper does not purport to offer the 15.6% figure for all LTE networks. (Id. ¶ 43.) Rather, the paper is a simulation that assumes various facts about a hypothetical LTE setup—and the paper proposes an approach that intentionally must be customized to the specifics of a given LTE network to simulate resource availability for that (real) network. (*Id.*) But Mr. Thompson just takes the 15.6% derived from the hypothetical LTE network posited in the paper for demonstrative purposes and does nothing to adjust the parameters to any specific U.S. LTE network, let alone to account for all U.S. networks. *Third*, the paper considers only resource availability in the "downlink"—i.e., in the components of the network responsible for transfers from a cell tower to a mobile device. (*Id.* ¶ 41.) Indeed, the paper has "LTE downlink performance" in its name. (Id. ¶ 44.) But Plaintiffs primarily challenge transfers going from mobile devices to cell towers (the "uplink"), and because of the way LTE networks operate, Ahmadzadeh's results are not applicable to the uplink—and thus have no connection to most of the challenged transfers.  $(Id. \ \P \ 41.)$ 

Perhaps most importantly, there is no evidence that any cellular carrier factors the resource

ratios that the Ahmadzadeh Paper studies into how it debits a user's cellular data allowance (even				
putting aside that there is no coherent sense in which this radio resources statistic could be used in				
this way). (Updated Data Analysis ¶ 44.) In fact, when asked whether this 15.6% premium had				
anything to do with how cellular carriers count network transfers against a user's allowance, Mr.				
Thompson deflected, stating, "I don't have an opinion on how network operators bill, et cetera.				
There's a different expert with that opinion." (Second Thompson Depo. at 425:2-7.) However,				
Plaintiffs have proffered no expert that offers any such opinion. <sup>5</sup>				
Because Mr. Thompson misunderstands the Ahmadzadeh Paper, and because even he				
admits he has no basis to assume it has any relevance to how cellular carriers count traffic against				
user allowances, the network overhead premium is both unreliable and irrelevant.				
c. Mr. Thompson's "Log Loss" "Correction" is unreliable.				

Mr. Thompson instructed Dr. Stec to increase all damages estimates by "correct" for what he terms "log loss." (Thompson Rep. ¶ 110.) Mr. Thompson's only basis for this significant premium, which adds as much as \$300 million\$ to alleged damages, is a single bullet point in an informal document produced in discovery that refers to as shown below.



(Ex. 14 at '23499.) From this alone, Mr. Thompson guesses that both NetStats and Westworld logs of the time, and that, as a result, he can reliably increase estimated network traffic by "correct" the NetStats and Westworld samples produced in discovery. But this log

<sup>5</sup> Indeed, the point of the Ahmadzadeh Paper is to simulate this resource availability precisely because cellular network carriers cannot otherwise measure it—so by the starting premise of the paper, cellular carriers cannot count this resource availability against user allowances (if that were even coherent in the first place), since they have no way of counting resource availability of this type at all. (Updated Data Analysis ¶ 44.) Moreover, the analysis in the Ahmadzadeh Paper does not measure resource availability in bytes—and it could not, since the 15.6% figure has nothing to do with the transmission of bytes and is not a measure of bytes, but rather a percentage of radio resources. For this still further reason, carriers could not coherently debit bytes from user allowances due to this estimated radio resource usage. (*Id.* ¶ 40.)

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loss premium is flawed for multiple reasons:

First, as an overarching matter, Mr. Thompson is just guessing what this bullet point means. Mr. Thompson relied on no other documentation or source. (See Second Thompson Depo. at 441:18-23 (admitting the same).) But Mr. Thompson never explains how he can read this single bullet, without any other background, and reliably determine how such would impact the network usage samples produced in discovery. In fact, when asked basic questions about this data loss, he was unable to answer, saying, "I've not seen the underlying data behind the "" (Id. at 447:21-22.) Mr. Thompson's guesses about this are not admissible because expert opinions may not be based on assumptions of fact without evidentiary support. Guidroz-Brault v. Mo. Pac. R.R. Co., 254 F.3d 825, 830–31 (9th Cir. 2001) (excluding expert testimony based on an assumption "not sufficiently founded on facts" of the case); Klein v. Meta Platforms, Inc., 2025 WL 489871, at \*7-8 (N.D. Cal. Feb. 13, 2025) (similar).

Second, Mr. Thompson admitted that even if this is what he speculates it is, he has no way of knowing if the applies to devices in the U.S.—and therefore has any relevance to the samples he analyzed. In fact, he admitted it might be *lower* in the U.S., given that more sophisticated devices sold here may experience less than the *global* average he believes the bullet notes, which includes cheaper devices in other countries that use less reliable networks. (Second Thompson Depo. at 446:25-447:4 ("[Q]: Is it possible that the log loss rate in the United States in 2023 is much lower than ? A: I suppose it's possible.").) But if Mr. Thompson does not know the

Third, Mr. Thompson's "log loss" premium assumes that all devices experience roughly the same When pressed at deposition if it is possible that just a few devices are instead responsible for most of the which would render the proposed premium unreliable here, Mr. Thompson said (without any basis), "[i]t doesn't seem likely." (Second Thompson Depo. at

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is concentrated in a few devices, then Mr. Thompson's approach is not reliable for this independent reason. (Updated Data Analysis ¶ 18.) This is because those devices would be less likely to appear in the sample by virtue of the tisself—so Mr. Thompson cannot then assume that the loss rate for devices in the sample is still since the sample would be biased toward devices that do not suffer from the phenomenon. (Id. ¶ 19.)

1	448:12.) He was, however, seemingly unaware that other documents produced in discovery
2	(Updated
3	Data Analysis ¶ 18.) This shows that Mr. Thompson is not just guessing about this he
4	is guessing wrong. See Bakst v. Cmty. Mem'l Health Sys., Inc., 2011 WL 13214315, at *20 (C.D.
5	Cal. Mar. 7, 2011) (collecting cases holding inadmissible an expert's opinion "based on factual
6	assumptions that are entirely unsupported in the record").
7	Fourth, even putting these issues aside, the bullet point from a document in 2023 that Mr.
8	Thomspon relies on references a rate. But Mr. Thompson assumed, without
9	basis, that this rate held true in every year of the class period going back to 2016 (or, as Dr. Stec
10	ultimately applied the premium, to 2010). Mr. Thompson admitted how speculative this still further
11	assumption is at deposition, agreeing he has no sense for what the rate was in other years—and
12	even acknowledging that a margin comment in the document suggests the rate was lower in the
13	years before 2023. (Second Thompson Depo. at 442:8-17 ("Q: Do you know what the
14	was in 2022? A: I don't know that I have a figure for 2022."), 443:6-7 ("Q: Could it have been 3
15	percent in 2020? A: I suppose it could have been.").) Mr. Thompson, nonetheless, instructed Dr.
16	Stec to apply a premium to every year. (Ex. 15 ("Second Stec Depo.") at 116:23-117:5.)
17	For all these reasons, Mr. Thompson's "log loss" instruction is no more than unreliable
18	speculation without any foundation in demonstrated facts—and is therefore inadmissible.
19	d. Mr. Thompson's "Reported Device" "Correction" is unreliable.
20	Mr. Thompson "corrected" the network usage data in a still further way in his "Reported
21	Device" approach. Similar to the Cellular Transfers Everyday Assumption that doomed the
22	Withdrawn Analysis, Mr. Thompson again assumed that certain devices that reported no
23	Challenged Transfers on a given day (based on the Westworld data) must have sent such traffic
24	regardless. In this latest iteration, Mr. Thompson turned to a second data set, the
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28	(Ex. 16 ("Updated Scripts and Data") ¶ 9.) From this assumption, Mr. Thompson manipulates the

COOLEY LLP ATTORNEYS AT LAW SAN FRANCISCO data to treat these devices as if they had sent this traffic *despite reporting otherwise*, significantly (and arbitrarily) increasing damages. (Updated Data Analysis ¶¶ 21-24.)

# e. Mr. Thompson's output files are unreliable.

speculation") (quoting Domingo ex rel. Domingo v. T.K., 289 F.3d 600, 606 (9th Cir. 2002)).

Using the (flawed) Current Analysis, Mr. Thompson created output files that he provided to Dr. Stec for use in calculating alleged damages. However, these files include significant errors: The outputs of Mr. Thompson's NetStats analysis report no network usage at all in connection with the Challenged Transfer—one of the largest categories Plaintiffs challenge. (Updated Data Analysis ¶ 10-14.) That Mr. Thompson's outputs are not reliable alone renders Dr. Stec's downstream damages analyses unreliable. *In re Cathode Ray Tube (CRT) Antitrust Litig.*, 2017 WL 10434367, at \*2 (N.D. Cal. Jan. 23, 2017) ("Where an expert bases her opinion on—or simply repeats—the unreliable opinion of another expert, a district court may properly exclude the first expert's testimony."); *Goodell*, 2021 WL 2533564, at \*6 ("[A]n expert can appropriately rely on the opinions of others if other evidence supports [her] opinion and the record demonstrates that the expert conducted an independent evaluation of that evidence." (citation omitted)). Moreover, the nature and extent of this error, and how it might impact the outputs for other Challenged Transfers,

are unknown. (Updated Data Analysis ¶ 12.) The fact that so obvious an error exists in Mr.

Thompson's outputs suggests these files were not reliably prepared or audited. *See Lassalle v.*McNeilus Truck & Mfg., Inc., 2017 WL 3115141, at \*5 (N.D. Cal. July 21, 2017) (excluding expert's report that was rife with "factual errors").

2. Dr. Stec's Analysis and Damages Calculations Are Inadmissible.

a. Dr. Stec did not follow Mr. Thompson's instructions.

Dr. Stec, an economist, has stated at two different depositions that he is not an expert in data analysis or networking, is depending on other experts to provide him with inputs regarding the network usage data, and is not offering his own opinions on these issues. (*See*, *e.g.*, Second Stec Depo. at 42:25-43:10 ("I don't have the data expertise that Mr. Thompson does"), 43:20-21 ("I have not worked with the data in that way, the same way Mr. Thompson has"), 55:22-58:5 (similar).) As such, in the latest round of "updates," Mr. Thompson provided Dr. Stec with specific input files and specific instructions on how to use them. (*See* Updated Scripts and Data ¶¶ 30-34 ("Instructions to Dr. Stec for Netstats"), ¶¶ 24-29 ("Instructions for Dr. Stec for Westworld").) As discussed above, these input files include errors that render them unreliable. (*See* Section IV.A.5, *supra*.) But even putting that issue aside, Dr. Stec appears to have *again* not followed Mr. Thompson's instructions.

*First*, Mr. Thompson instructed Dr. Stec to use two .csv files that contained the output of Mr. Thompson's NetStats analysis (identifying them by file name in his instructions). *However*, *Dr. Stec did not use these files.* (Updated Data Analysis ¶¶ 9-10.) He instead used other inputs of unknown origin and without explanation. (*Id.*) This alone renders the analysis unreliable.

**Second**, Mr. Thompson instructed Dr. Stec to use a particular method for one of the approaches Dr. Stec uses to calculate damages from the NetStats data. (Updated Scripts and Data ¶¶ 31-34.) But again Dr. Stec did not follow these instructions. (Updated Data Analysis ¶¶ 9-10.) Instead, he introduced a complex method of simulating supposedly missing data (*i.e.*, another purported "correction" to what the actual data shows) that appears to be of his own design. (Stec Rep. ¶¶ 42-45.) But Dr. Stec, an *economist*, never explains (1) why he abandoned the approach Mr. Thompson instructed him to use or (2) how he is qualified to simulate network activity—

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particularly after he has repeatedly disclaimed that he is in a position to offer exactly these kinds of opinions. Moreover, Dr. Stec offers no reliable basis for his purported simulation, even putting aside his qualifications. (*Id.*; *see also* Updated Data Analysis ¶ 26.) He assumes that during two periods in which NetStats reporting dropped, devices saw the same volume of Challenged Transfers as the 30 days prior—but his own analysis shows that there was significant volatility over the observed time frame, meaning that Dr. Stec cannot reliably assume volumes in one period would match volumes in another. (Updated Data Analysis ¶ 26.) That is, Dr. Stec offers no explanation for how this "correction" to the data that inflates damages is not just more guesswork.

# b. Dr. Stec's sampling is not representative of the class.

When an expert relies on a sample to make estimations, it is critical that the sample is representative of the broader population—and any defect of this type renders a statistical analysis inadmissible. *See, e.g., In re Countrywide Fin. Corp. Mortg.-Backed Sec. Litig.*, 984 F. Supp. 2d 1021, 1039–40 (C.D. Cal. 2013) (excluding expert's statistical opinions where the sample chosen was not representative of the population). However, Dr. Stec's calculations are biased in at least two ways that, putting aside whether the data itself is reliable, render them nonrepresentative

First, only devices with the "Usage and Diagnostics" setting turned on send the NetStats and Westworld logs. (Updated Data Analysis ¶¶ 54-57.) This means that all the sample data Plaintiffs' experts analyze comes from this subset of devices. However,

Second, even amongst those devices that do send NetStats and Westworld logs, some send

the logs in

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(*Id.* ¶¶ 59-60.)

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# Dr. Stec's "flat line" backwards extrapolation is unreliable.

Dr. Stec simply assumes, without basis or analysis, that network usage levels before 2020

(the first year there is data) were exactly the same as in 2020. (*Id.* ¶¶ 51-53.)<sup>7</sup> But such a "flat line" extrapolation makes no sense here, where Plaintiffs' other analyses show significant changes in network usage year-over-year and Plaintiffs' experts argue that some of the Challenged Transfers were growing over time (suggesting lower levels of network usage in earlier years). (*Id.* ¶¶ 51-53.) In fact, Plaintiffs do not reliably establish that the Challenged Transfers even *existed* in many of the years Dr. Stec shows network usage levels equivalent to those in 2020, let alone that they were active across all class-member devices. (*Id.*); *Caldwell v. City of San Francisco*, 2021 WL 1391464, at \*7 (N.D. Cal. Apr. 13, 2021) (citations omitted) (excluding expert opinions based on "minimally supported assumptions to extrapolate significant . . . economic damages"); *ATA Airlines, Inc. v. Fed. Express Corp.*, 665 F.3d 882, 895 (7th Cir. 2011) (overturning jury verdict where expert's opinion should have been excluded due in part to a "straight line" extrapolation of profits which was unsupported by the evidence in the record); *Wyndham Vacation Ownership, Inc. v. Sussman*, 2021 WL 4948099, at \*3 (M.D. Fla. Sept. 20, 2021) (excluding report from Dr. Stec where results could not be reliably extrapolated).

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# 3. Neither of Plaintiffs' Experts Even Attempt to Determine a Confidence Interval or Show That Their Methods Have Been Tested and Accepted.

Plaintiffs engage in complex statistical analyses—both to simulate allegedly missing

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network usage data and to extrapolate from a sample to the broader class population. But Plaintiffs do not engage in the basic steps of calculating confidence intervals or margins of error. In fact, Mr.

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Thompson admitted that he had not even "thought" to do so and, as a result, had no sense for how accurate his analyses were. (*See* Section II.D, *supra*.) He went on to suggest the level of accuracy

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may not even be determinable. (Id.) Dr. Stec likewise does not calculate these measures for his

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<sup>&</sup>lt;sup>7</sup> In Google's concurrently filed motion challenging Plaintiffs' approach to estimating the market value of cellular data plans, Dr. Stec and Plaintiffs' expert Dr. Entner make a similar error, arbitrarily applying cellular data plan pricing from one year to others.

extrapolations from the sample data to the class population.

But this renders the opinions at issue, including both the statistical analysis of the network usage data samples by Mr. Thompson and Dr. Stec, and Dr. Stec's downstream damages calculations, inadmissible. This is because establishing a confidence interval and margin of error is key to a rigorous data analysis. *See* David L. Faigman et al., Modern Scientific Evidence: The Law & Science of Expert Testimony § 4:17 (2024-2025 ed.); *Allen v. Am. Cap. Ltd.*, 287 F. Supp. 3d 763, 787 (D. Ariz. 2017) (excluding expert opinions where the fact that the rate of statistical error could have been computed but was not "weigh[ed] against [the] reliability" of the opinions); *Maldonado v. Epsilon Plastics, Inc.*, 22 Cal. App. 5th 1308, 1330-31 (2018) (rejecting expert sample data as a "matter of law" where confidence interval was incomplete).

More generally, all of Mr. Thompson and Dr. Stec's network usage opinions discussed herein rely on methods they concocted by them to increase damages. Critically, neither expert even attempts to show, as to any of these methods, "(1) whether the scientific theory or technique can be (and has been) tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) whether a particular technique has a known potential rate of error; and (4) whether the theory or technique is generally accepted in the relevant scientific community." *See Metabolife Int'l, Inc. v. Wornick*, 264 F.3d 832, 841 (9th Cir. 2001). That is, Mr. Thompson and Dr. Stec are making it up as they go, but such an approach cannot satisfy the requirements of Rule 702. *Id.* As the Fourth Circuit aptly put it, "[w]ithout testing, supporting literature in the pertinent field, peer reviewed publications or some basis to assess the level of reliability, expert opinion testimony can easily, but improperly, devolve into nothing more than proclaiming an opinion is true 'because I say so.'" *Small v. WellDyne, Inc.*, 927 F.3d 169, 177 (4th Cir. 2019).

## 4. If Plaintiffs' Experts Are Right, Their Opinions Would Be Inadmissible.

Mr. Thompson and Dr. Stec purport to identify wide-ranging deficiencies in the network usage data that they use to justify the various "corrections" and enormous inflations of damages discussed above. (See Sections II.B.1-2, supra.) Neither reliably shows that there are such deficiencies but even if Plaintiffs' experts are right, they cannot simply distort the data to report something it does not. Instead, if these deficiencies exist at the scale Plaintiffs' experts contend, the

data could not be relied on at all and thus cannot form the basis for an admissible expert opinion. See In re Taxotere (Docetaxel) Prods. Liab. Litig., 26 F.4th 256, 268-69 (5th Cir. 2022) (expert opinion that was based upon unreliable data was improperly admitted). That is, if Plaintiffs have identified such fundamental problems with the network usage data, then Mr. Thompson and Dr. Stec's network usage calculations flowing from this allegedly unreliable data must be thrown out.

### IV. OTHER TECHNICAL ANALYSES

# A. Many of Mr. Thompson's Other Opinions Are Inadmissible.

# 1. Mr. Thompson's Advertising Opinions Are Inadmissible.

Plaintiffs' expert reports falsely try to frame the Challenged Transfers as primarily serving Google's mobile advertising systems. Plaintiffs have tasked Mr. Thompson with selling this case theme, but his conclusions in this regard are not supported by any reliable analysis of the evidence. Mr. Thompson cannot speculate on this issue or offer mere insinuations.

# a. Clearcut is not an ad targeting system.

Clearcut is a system through which logs are sent from Android devices to Google. (Second
Jeffay Rep. ¶¶ 89-90.)
Later in his report, Mr. Thompson notes that he looked at a list of

COOLEY LLP ATTORNEYS AT LAW SAN FRANCISCO short of stating as much due to a lack of evidence, is also not a competent expert opinion.

# d. Plaintiffs' ads theme more generally.

More generally, Mr. Thompson and Plaintiffs' other technical experts should not be allowed to insinuate that the Challenged Transfers serve primarily to "power" Google's advertising systems, or otherwise try to imply a nexus with advertising, based merely on speculation. An expert is an improper vehicle for such flimsy advocacy, absent any application of expertise to reliable evidence. *See generally Leakas*, *LLC*, 2024 WL 495938, at \*2.

# 2. Mr. Thompson's Wi-Fi "Sufficiency" Opinion Is Inadmissible.

Google collects logs from Android devices for wide-ranging purposes. (Second Jeffay Rep. ¶¶ 92-94, 109-114.) Collecting software logs in this way, including over cellular networks, is standard—in fact, Mr. Thompson himself admitted that all three apps he has designed send logs over cellular networks back to the developer. (First Thompson Depo. at 30:6-32:15.) Yet, he boldly asserts that across the over sent through Clearcut—almost all of which he has no familiarity with—it would have been "sufficient" to instead collect the logs only over Wi-Fi. (Thompson Rep. ¶ 26.) This sweeping statement, divorced from any analysis or even familiarity with most of the logging, lacks foundation and evidentiary or analytical support.

# 3. Mr. Thompson's Clearcut Functionality Opinion Is Inadmissible.

Mr. Thompson claims that Clearcut transfers "do not serve any user-facing functions" and are "unnecessary for the functionality of whatever software or application the user is currently using on their device . . . ." (Thompson Rep. ¶ 29.) Mr. Thompson offers no basis for so broad a generalization, particularly where he, again, does not know what most of the over logs do. (Second Thompson Depo. at 264:24-271:10.) That is, he is merely *guessing* that they are not tied to user-facing functionalities. Moreover, Dr. Jeffay's review of a sample of documents produced in discovery shows many examples of how Clearcut logs can be integral to user-facing functionalities. (Second Jeffay Rep. ¶¶ 109-114.) Mr. Thompson's broad assertion, which is not supported in any way and is contradicted by evidence, is not admissible.

# 4. Mr. Thompson's Attestation Network Usage Opinion Is Inadmissible.

As part of ensuring device security,

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1 2 3 4 5 He has no basis for this guess—he refers to no document, no deposition testimony, and no 6 testing. See Guidroz-Brault, 254 F.3d at 830-31 (excluding expert testimony based on an 7 assumption "not sufficiently founded on facts" of the case). Importantly, in other analyses of other 8 data (and when it suits Plaintiffs' interests), Mr. Thompson argues that a "null" value may mean 9 only that a field has not been populated. (See, e.g., First Thompson Depo. at 68:17-19 ("So a null 10 value is indicative of it trying to report something, but not having a value to report."), 191:19-21 11 ("Something could be null that, you know, ends up basically there's no data."), 190:23-191:4 ("The tag itself could be null, which means it doesn't get counted properly, wasn't recorded properly."), 12 13 48:23-24 ("null means it's not populated").) 14 15 16 17 **Second**, Mr. Thompson's "analysis" was unusually unscientific for still other reasons. Mr. 18 Thompson's report provides only the vague estimate that there are "thousands" of instances in 19 which the 20 21 22 23 24 25 26 27

When pressed on these issues, Plaintiffs' counsel explained by email only that Mr. Thompson had not conducted a "quantitative analysis" after all, deeming it "not necessary."

(Giulianelli Email at 1.) Instead, he supposedly conducted a "qualitative analysis" of unspecified type that was, apparently, never written down anywhere (or was deleted). (*Id.*) It is not clear what this even means, but admissible expert opinions must be rigorous, explainable, and replicable. Mr. Thompson's vague and non-systematic review of data falls short of this standard and is not admissible. Indeed, Google's expert Dr. Jeffay was unable to reproduce the alleged results and Google remains uncertain to this day what Mr. Thompson even purports to have done. (Second Jeffay Rep. ¶¶ 152-153.); *Timm v. Goodyear Dunlop Tires N. Am., Ltd.*, 932 F.3d 986, 994 (7th Cir. 2019) (explaining expert opinion must be based on an "objectively-verifiable" approach).

## B. Many of Dr. White's Opinions Are Inadmissible.

## 1. Dr. White's "Same Types of Transfers" Opinion Is Inadmissible.

Dr. White makes the broad statement that all Android devices send the "same types of transfers." (Ex. 20 ("White Rep.") ¶ 5.) He cites no document, conducts no study, and offers no other support for this opinion. It is inadmissible for those reasons alone. Winters v. Fru-Con Inc., 498 F.3d 734, 743 (7th Cir. 2007) (explaining "[a]n ultimate conclusion with no analysis is meaningless" and thus is not helpful to the factfinder (citation omitted)). Moreover, it is patently false. Plaintiffs' and Google's experts have shown in myriad ways that Android devices will send widely differing network transfers depending on such variables as (1) the version of Android or GMS Core loaded to the device, (2) what other apps the device has loaded, (3) the configuration of settings, (4) user behavior, and (5) the point in time during the class period. (Second Jeffay Rep. ¶¶ 167-170.) In fact, these variations are profound amongst the Challenged Transfers themselves. (Id.)

### 2. Dr. White's "No Disclosure" Opinion Is Inadmissible.

Dr. White next claims that the Challenged Transfers are not disclosed to users. (White Rep. ¶¶ 29, 58.) But here too he lacks foundation and is again wrong. After evading questioning for almost 20 minutes, it became clear that Dr. White had never reviewed the Google Privacy Policy (See Ex. 30, White Depo. at 195:18-202:9)—a policy which all proposed class members agreed to and which discloses every one of the Challenged Transfers. Mr. White appeared unaware of many other disclosures that detail the Challenged Transfers and had clearly not seen all the materials presented to Android users. For example, he asserts CheckIn, known publicly as the Device

Configuration Service, is "only visible" by reviewing source code and not disclosed to users otherwise, but this transfer type has a *dedicated public webpage* that spells out granular details of how the service works. (Compare White Rep. ¶ 58; with Learn about the Android Device (https://support.google.com/android/answer/9021432?hl=en).) Configuration Service evidentiary issue is not just that Dr. White is wrong, it is that he has no foundation for the opinion as he clearly has not reviewed most of the relevant disclosures.

#### 3. Dr. White's Settings Opinions are Inadmissible.

Dr. White indicates through a chart that nine categories of Challenged Transfers are allegedly not impacted by any of six types of settings. (White Rep. ¶ 59.) But Dr. White offers no basis for these conclusions. (Id.) For many, he has conducted no analysis at all.8 For example, he does not explain how he knows that GLS Uploads are not prevented by Data Saver—he just asserts it without support. For other settings, the record shows he is demonstrably wrong. For example, a Google witness testified that and Dr. White does not explain why he believes otherwise, despite this record. (Ex. 21, Elarief Depo. at 101:3-4 ).) Likewise, Plaintiffs' expert Dr. Leith conducted experiments that show the Usage and Diagnostic setting turns off many of the logs sent through Clearcut. (Second Jeffay Rep. ¶¶ 146-150 (explaining how Dr. Leith's testing results show the same).) Dr. White, who has conducted no analysis or testing and has no other basis for his conclusions, cannot simply assert that nine categories of Challenged Transfers are immune to settings. A mere declaration of fact without more is not reliable expert opinion.<sup>9</sup>

#### V. **CONCLUSION**

For all these reasons, the expert opinions addressed herein should be found inadmissible.

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<sup>&</sup>lt;sup>8</sup> Dr. White references analyses conducted by Mr. Thompson and Dr. Leith, but to the extent he means to rely on these to put forward this chart and the opinions it contains, he cannot merely regurgitate another expert's findings and represent them as his own, particularly when he has not done anything to evaluate their accuracy.

<sup>&</sup>lt;sup>9</sup> This motion challenges the reliability of many of the opinions in Plaintiffs' technical expert

reports. Hundreds of other assertions and opinions in these reports are irrelevant, no more than selective quotations from documents that do not rise to the level of expert evidence and/or amount to hearsay, or, even if based in some fact, decidedly misleading. Google reserves the right to challenge the admission of such alleged expert opinions at trial.

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